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In the course of banding operations and certain special studies on the life history, habits, temperature and other features of the Bank Swallow conducted in the Okoboji region, northwestern Iowa, during the past few summers, occasional opportunity was offered for similar investigations in connection with the House Wren, *Troglodytes a. aedon.*

Perhaps the items of greatest interest in these experiments have to do with the rate of increase in weight and temperature of young birds and therefore the substance of this paper will be confined to that field.

Temperature readings were taken with a specially constructed clinical thermometer graduated to tenths of a degree in the Fahrenheit scale. The bulb of this instrument was inserted well down into the stomach of the bird and permitted to remain there for at least one minute, when it was withdrawn. Even very young birds suffered no harm and little inconvenience from this procedure. Weight readings were taken with a set of balances fitted into an old microscope case. The instrument was sensitive to one-tenth gram.

Before taking up a consideration of the young birds it may be worth while, for purposes of comparison, at least, to indicate something of the temperature and weight of adult House Wrens. An individual captured in one of the buildings on the grounds of the Iowa Lakeside Laboratory, August 2, 1925, at 2:35 p.m., and banded as No. 36282A, will serve as an example. The weight of this bird was 11.5 grams and its temperature was 110.6 degrees. Dr. A. Wetmore gives the temperature of a male of this species as 106.2 degrees.[1]

A series of temperature readings taken on this bird at approximately one-minute intervals and beginning immediately after the first reading was made is of interest for, with two exceptions, they show a fairly regular decline until the minimum was attained, the average rate of decline being about three-tenths degree per minute. The entire series of readings is as follows: 110.6°, 109.8°,108.4°,

1 Smithsonian Miscellaneous Collections, 72, No. 12, 1921, 45.

108.6°, 108.0°, 107.4°, 107.1°, 106.8°, 106.5°, 106.3°, 106.2°, 106.4°, 106.0°, 105.8°, 105.8°.

Immediately following the last reading above, the bird was freed in a gauze collecting bag in which it fluttered more or less helplessly and aimlessly, thus exerting a good deal of physical effort. After a minute of this violent exercise the temperature of the bird registered 106.5 degrees, a rise of seven-tenths degree.

The two following tables will illustrate some interesting features in connection with the temperature of young birds.

Table I

No.	July	August					
	31	1	2	3	4	5	6
36276A	103.2°	104.1°	104.8°	105.8°	106.4°	106.7°	
36277A	102.0°	103.2°	104.5°	105.2°	106.3°	105.8°	105.0°
36278A	102.4°	103.6°	105.1°	105.9°	107.4°	107.0°	106.6°
36279A	102.6°	102.1°	105.0°	105.0°	106.4°	106.4°	104.5°

The birds in the above table were seven days old when the first temperature readings were taken. The observations were made at about 3:00 p.m. on successive days.

It is of interest to note that a series of readings taken on these birds at 9:45 p.m. on August 3 showed uniformly lower temperatures than the afternoon readings on the same birds even though the adult was flushed from the nest immediately before the evening readings were made. The individual evening readings follow:

No. 36276A----------103.7°
No. 36277A----------103.5°
No. 36278A----------103.3°
No. 36279A----------102.4°

Table II

No.	July							
	5	7	9	11	13	15	17	18
97595A	3.1 100.1°	6.2 102.5°	8.5 103.8°	10.2 104.7°	11.1 104.1°	11.7 106.8°	11.1 106.3°	All had left nest
97596A	1.1 98.6°	3.0 100.1°	4.0 103.0°	Missing from nest				
97597A	3.0 100.1°	6.1 103.2°	7.8 104.7°	10.1 105.1°	10.6 104.1°	11.4 106.4°	11.0 104.6°	
97598A	2.4 100.2°	5.3 100.8°	7.7 103.8°	8.9 103.9°	11.1 104.1°	11.4 106.0°	10.7 105.2°	
97599A	3.2 100.2°	6.4 100.2°	8.4 104.0°	10.2 104.9°	10.9 105.2°	11.7 105.8°	10.9 107.5°	
97600A	1.7 98.4°	4.8 99.8°	6.9 103.8°	Dead in nest				
97601A	3.1 100.1°	6.1 99.4°	8.4 103.8°	9.8 105.6°	11.0 104.5°	11.4 106.0°	10.9 107.2°	

The birds in Table II were thirty-six hours old when the first readings were made at 6:45 p.m. on July 5. Readings were con-

tinued without interruption at the same time of day on alternate days until the birds left the nest. In this table both weight and temperature records were kept for individual birds, the weight reading being indicated above the corresponding temperature reading in each case.

Conclusions. — The weight of young House Wrens increases very rapidly for about four days after hatching, when the rate is somewhat retarded though gradual, until about the twelfth day when the maximum weight is attained. Following this, a slight reduction occurs and at the time of first leaving the nest the weight averages somewhat less than it does two days earlier.

A corresponding gradual and regular increase in temperature also occurs until flight ability is attained, the rate of increase averaging about five-tenths degree a day.

Evening temperatures were found to be lower than afternoon temperatures and a more or less distinct rhythmic fluctuation is suggested.

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